DOE/WIPP 99-2194
Revision 2

Waste Isolation Pilot Plant Environmental Monitoring Plan

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Prepared for
U.S. Department of Energy
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PREFACE

U.S. Department of Energy (DOE) Order 450.1, *Environmental Protection Program,* requires each DOE site to conduct environmental monitoring. Environmental monitoring at the Waste Isolation Pilot Plant (WIPP) is conducted in order to:

- Verify and support compliance with applicable federal, state, and local environmental laws, regulations, permits, and orders.
- Establish baselines and characterize trends in the physical, chemical, and biological condition of effluent and environmental media.
- Identify potential environmental problems and evaluate the need for remedial actions or measures to mitigate the problem.
- Detect, characterize, and report unplanned releases.
- Evaluate the effectiveness of effluent treatment and control, and pollution abatement programs.
- Determine compliance with commitments made in environmental impact statements, environmental assessments, safety analysis reports, or other official DOE documents.

This Environmental Monitoring Plan (EMP) has been written to contain the rationale and design criteria for the monitoring program, extent and frequency of monitoring and measurements, procedures for laboratory analyses, quality assurance (QA) requirements, program implementation procedures, and direction for the preparation and disposition of reports. Changes to the environmental monitoring program may be necessary to allow the use of advanced technology and new data collection techniques. This EMP will document any proposed changes in the environmental monitoring program. Guidance for preparation of Environmental Monitoring Plans is contained in DOE/EH-0173T, *Environmental Regulatory Guide for Radiological Effluent Monitoring and Environmental Surveillance*.

The plan will be effective when it is approved by the appropriate Head of Field Organization or their designee. The plan discusses major environmental monitoring and hydrology activities at the WIPP and describes the programs established to ensure that WIPP operations do not have detrimental effects on the environment. This EMP is to be reviewed annually and updated every three years unless requested by the DOE or contractor.

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ABBREVIATIONS/ACRONYMS

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CH	contact-handled
CMS	central monitoring system
DOE	U.S. Department of Energy
EDE	effective dose equivalent
EDO	environmental data operations
EMP	Environmental Monitoring Plan
EPA	U.S. Environmental Protection Agency
FAS	fixed air sampler
FEIS	Final Environmental Impact Statement
HEPA	high-efficiency particulate air (filter)
Lo-Vol	low-volume
LWA	Land Withdrawal Act
LUR	land use request
MDL	method detection limit
MOU	memorandum of understanding
MREM	millirem
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NRC	Nuclear Regulatory Commission
NQA	Nuclear Quality Assurance
OEMP	Operational Environmental Monitoring Plan
OMB	Office of Management and Budget
PZ	piezometer
QA	quality assurance
QAPD	Quality Assurance Program Description
QAPjPs	quality assurance project plans
QC	quality control

RCRA	Resource Conservation and Recovery Act
RH	remote-handled
SAR	Safety Analysis Report
SER	site environmental report
SOP	standard operating procedure
SSW	shallow subsurface water
TDS	total dissolved solids
TKN	total Kjeldahl nitrogen
TRU	transuranic
TRUPACT	transuranic package transporter
U.S.C.	*United States Code*
VOC	volatile organic compound
WIPP	Waste Isolation Pilot Plant
WTS	Washington TRU Solutions LLC
WQSP	Water Quality Sampling Program